

REMARKS

By the present amendment, claims 63 to 65 and 67-71 are pending in the application. Claims 63 and 64 are the independent claims.

Claim Amendment

Independent claims 63 and 64 have been amended by the present amendment to delete the phrase “and/or an inorganic material coating” from independent claims 63 and 64.

The present amendment to independent claims 63 and 64 is made in response to rejections under 35 U.S.C. §112, first and second paragraphs, and the claim objection set forth in the Office Action mailed April 20, 2006.

Claim Objection

Dependent claim 65 was objected to under 37 C.F.R. §1.75(c) as being of improper dependent form.

In view of the amendments to independent claims 63 and 64 by the present amendment which deletes the phrase “and/or an inorganic material coating” from independent claims 63 and 64, it is submitted that the objection to dependent claim 65 has been obviated.

It is therefore respectfully requested that the objection to dependent claim 65 under 37 C.F.R. §1.75(c) be withdrawn.

§112

Claims 63-65 and 67-71 were rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement.

Claims 63-65 and 67-71 were rejected under 35 U.S.C. §112, second paragraph, for failure to particularly point out and distinctly claim the subject matter which the applicants regard as the invention.

The rejections under 35 U.S.C. §112, first and second paragraphs, objected to the optional language phrase “or an inorganic material coating” in independent claims 63 and 64.

By the present amendment, independent claims 63 and 64 have been amended to delete the phrase “and/or inorganic material coating”.

In view of the amendment of independent claims 63 and 64 by the present amendment, it is respectfully requested that the rejection of claims 63-65 and 67-71 under 35 U.S.C. §112, first and second paragraphs, be withdrawn.

§102

Claims 63-71 were rejected in the Office Action mailed October 19, 2005 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,727,579 to Eldridge.

This rejection, as applied to the amended claims, is respectfully traversed.

These were no rejections over the prior art in the Office Action mailed April 20, 2006 because, in light of the rejections under 35 U.S.C. §112, the Office Action stated there was a great deal of confusion and uncertainty as to the proper interpretation of the limitations of the claims. See Office Action mailed April 20, 2006 at page 3.

Patentability

The present invention provides a semiconductor device, using a bonding material for linking a semiconductor terminal to a connecting terminal for an outside

circuit, characterized by reinforcing the bonding material and/or a joint between the semiconductor terminal and the connecting terminal with a reinforcing material comprising a metal coating covering the bonding material and/or joint, and a diffusion layer at an interface between the metal coating and the bonding material and/or joint, as in amended claim 63.

In amended independent claim 64, the diffusion layer is located at an interface between the metal coating and a bonding wire.

On the other hand, the electrical contact structures formed by configuring a flexible wire disclosed in U.S. Patent No. 6,727,579 is a gold-tin alloy at an interface between the gold wire and tin coating. The interface formed is a gold-tin eutectic, such as Au-Sn, or Sn-Pb, as mentioned at column 23, lines 37-40 "CASE-1 discloses depositing tin as a first layer on a gold wire stem, with a subsequent reaction of gold and tin at a temperature below the melting temperature of gold and tin eutectic", and at column 128, lines 3-7 "Next, the entire contact structure is subjected to heating sufficient to cause the gold (4902) and tin (4920) to form a gold-tin eutectic. It is within the scope of this invention that materials other than gold and tin, capable of forming a eutectic, can be employed-for example, lead and tin".

As stated above, US '579 does not disclose or suggest a diffusion layer at an interface between the metal coating, having a high melting temperature, and the bonding wire. Therefore, US '579 is very different from the present invention.

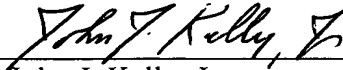
It is therefore submitted that independent claim 63 and independent claim 64, and all claims dependent thereon, are patentable over U.S. Patent No. 6,727,579 to Eldridge.

CONCLUSION

It is submitted that in view of the present amendment and foregoing remarks, the application is now in condition for allowance. It is therefore respectfully requested that the application, as amended, be allowed and passed for issue.

Respectfully submitted,

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